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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
Washington 25, D. C.

NASA Project A
Announcement No. 1
December 22, 1958

Invitation to Apply for Position of
RESEARCH ASTRONAUT-CANDIDATE
with minimum starting salary range of \$8,330
to \$12,770 (GS-12 to GS-15) depending
upon qualifications
at the NASA Langley Research Center
Langley Field, Virginia

I. DESCRIPTION OF PROJECT ASTRONAUT

The Manned Satellite Project is being managed and directed by NASA. The objectives of the project are to achieve, at the earliest practicable date, orbital flight and successful recovery of a manned satellite; and to investigate the capabilities of man in a space environment. To accomplish these objectives, a re-entry vehicle of the ballistic type has been selected. This vehicle not only represents the simplest and most reliable configuration, but has the additional advantage of being sufficiently light, so that it can be fitted on an essentially unmodified ICBM booster. The satellite will have the capability of remaining in orbit for 24 hours, although early flights are planned for only one or two orbits around the earth.

Although the entire satellite operation will be possible, in the early phases, without the presence of man, the astronaut will play an important role during the flight. He will contribute to the reliability of the system by monitoring the cabin environment, and by making necessary adjustments. He will have continuous displays of his position and attitude and other instrument readings, and will have the capability of operating the reaction controls, and of initiating the descent from orbit. He will contribute to the operation of the communications system. In addition, the astronaut will make research observations that cannot be made by instruments; these include physiological, astronomical, and meteorological observations.

Orbital flight will be accomplished after a logical buildup of capabilities. For example, full-scale capsules will be flown on short and medium range ballistic flights, before orbital flights will be attempted. Maximum effort will be placed on the design and development of a reliable safety system. The manned phases of the flight will also undergo a gradual increase in scope, just as is common practice in the development of a new research aircraft.

II. DUTIES OF RESEARCH ASTRONAUT-CANDIDATES

Research Astronaut-Candidates will follow a carefully planned program of pre-flight training and physical conditioning. They will also participate directly in the research and development phase of Project Astronaut, to help insure scientifically successful flights and the safe return of space vehicles and their occupants. The duties of Research Astronaut-Candidates fall into three major categories:

- a. Through training sessions and prescribed reading of technical reports, they will acquire specialized knowledge of the equipment, operations, and scientific tests involved in manned space flight. They will gain knowledge of the concepts and equipment developed by others and, as their knowledge and experience develops, they will contribute their thinking toward insuring maximum success of the planned flights.
- b. They will make tests and act as observers-under-test in experimental investigations designed (1) to develop proficiency and confidence under peculiar conditions such as weightlessness and high accelerations; (2) to enable more accurate evaluation of their physical, mental, and emotional fitness to continue the program; and (3) to help elicit the knowledge necessary to evaluate and enable the final development of communication, display, vehicle-control, environmental-control, and other systems involved in space flight.
- c. They perform special assignments in one or more of their areas of scientific or technical competence, as an adjunct to the regular programs of the research team, the research center, or NASA. These assignments may include doing research, directing or evaluating test or other programs, or doing other work which makes use of their special competencies.

Appointees who enter this research and training program will be expected to agree to remain with NASA for 3 years, including up to one year as Research Astronaut-Candidates. During the initial months final selection will be made of about half of the group to become Research Astronauts. Candidates who are not at that point designated Research Astronauts will have the option of continuing with NASA in other important capacities which require their special competence and training, without loss of salary and with other opportunities for advancement, and may remain eligible for future flights.

III. QUALIFICATION REQUIREMENTS

A. Citizenship, Sex, Age

Applicants must be citizens of the United States. They must be males who have reached their 25th birthday but not their 40th birthday on the date of filing application.

Applicants must be in excellent condition and must be less than 5 feet 11 inches in height.

B. Basic Education

Applicants must have successfully completed a standard 4-year or longer professional curriculum in an accredited college or university leading to a bachelor's degree, with major study in one of the physical, mathematical, biological, medical, or psychological sciences or in an appropriate branch of engineering or hold a higher degree in one of these fields. Proof of education will be required (see paragraph IV-4, below).

C. Professional Experience or Graduate Study

In addition to a degree in science or engineering or medicine, applicants must have had one of the following patterns of professional work or graduate study or any equivalent combination:

1. Three years of work in any of the physical, mathematical, biological, or psychological sciences.
2. Three years of technical or engineering work in a research and development program or organization.
3. Three years of operation of aircraft or balloons or submarines, as commander, pilot, navigator, communications officer, engineer, or comparable technical position.
4. Completion of all requirements for the Ph.D. degree in any appropriate field of science or engineering, plus 6 months of professional work.
5. In the case of medical doctors, 6 months of clinical or research work beyond the license and internship or residency.

Preference will be given to applicants in proportion to the relatedness of their experience or graduate study to the various research and operational problems of astronautics.

NASA desires to select and train a team of Astronaut-Candidates representing a variety of fields including physical and life sciences and technology.

D. Hazardous, Rigorous, and Stressful Experience

Applicants must have had a substantial and significant amount of experience which has clearly demonstrated three required characteristics: (a) willingness to accept hazards comparable to those encountered in modern research airplane flights; (b) capacity to tolerate rigorous and severe environmental conditions; and (c) ability to react adequately under conditions of stress or emergency.

These three characteristics may have been demonstrated in connection with certain professional occupations such as test pilot, crew member of experimental submarine, or arctic or antarctic explorer. Or they may have been demonstrated during wartime combat or military training. Parachute jumping or mountain climbing or deep sea diving (including with SCUBA), whether as occupation or sport, may have provided opportunities for demonstrating these characteristics, depending upon heights or depths attained, frequency and duration, temperature and other environmental conditions, and emergency episodes encountered. Or they may have been demonstrated by experience as an observer-under-test for extremes of environmental conditions such as acceleration, high or low atmospheric pressure, variations in carbon dioxide and oxygen concentration, high or low ambient temperatures, etc. Many other examples could be given. It is possible that the different characteristics may have been demonstrated by separate types of experience.

Pertinent experience which occurred prior to 1950 will not be considered. At least some of the pertinent experience must have occurred within one year preceeding date of application.

Applicants must submit factual information describing the work, sport, or episodes which demonstrate possession of these three required characteristics. See paragraph 5 in next section.

IV. MATERIAL TO BE SUBMITTED

These positions are to be filled through a procedure which requires sponsorship of each candidate by a responsible organization. An indication of this sponsorship and a rating of the candidate will be made on a Nomination Form by a member of the sponsoring organization, preferably a superior well acquainted with the candidate. The Nomination Form is attached to this announcement for distribution to solicited organizations, and will be filled out by them and returned by January 12, 1959, if at all possible, to Personnel Office (Project A), NASA, Langley Field, Virginia.

The following materials must be submitted by the applicant himself no later than January 26, 1959 to:

Personnel Office (Project A)
NASA
Langley Field, Virginia

1. Standard Form 57 (Application for Federal Employment). These forms will be furnished to applicants, but copies can be obtained from any U.S. Post Office or Federal agency.
2. Standard Form 86 (Security Investigation Data for Sensitive Position). This form will be furnished to applicants. Those applicants who are invited to report in person for further testing will be asked to bring with them one copy of this form completed in rough draft.
3. Standard Forms 88 (Report of Medical Examination) and 89 (Report of Medical History). These forms will be distributed to applicants. They should be completed by the applicant (paragraph 1 through 14 on S.F. 88 and all appropriate paragraphs of S.F. 89) and taken to the nearest military hospital, base, or procurement office authorized to administer flight physicals. A special letter addressed to such military installations is attached to this announcement, to be detached for use. Applicants should report for these physicals no later than January 21 in order to allow time for receipt of the forms at Langley by January 26. The examining military agencies will forward the S.F.'s 88 and 89 direct to NASA, Langley.
4. College transcript(s). Each applicant must submit a transcript (not necessarily an official copy) of his college or university record including descriptive course titles, grades and credits. These should accompany the application if possible.
5. A description of hazardous, rigorous, and stressful experiences pertinent to section D, above. This description should not exceed 2 or 3 typed pages. It must be factual (dates, events, etc.) and should be corroborated where practicable.
6. A statement concerning the pertinence of the applicant's professional or technical background to the problems of astronautical research and operations. This should not exceed one typed page.
7. A statement as to why the applicant is applying for this position. This statement should not exceed one typed page.

V. SELECTION PROGRAM

On the basis of evaluations of the above-described applications and supporting material, a group of men will be invited to report to the NASA Space Task Force at Langley Field, Virginia, on February 15, 1959. For about three weeks these men will be given a variety of physical and mental tests on a competitive basis to evaluate their fitness for training for the planned space flights. This will involve trips to Washington, D.C., and other locations and will include tests with such equipment as decompression chambers and centrifuges and also aircraft flights. At the end of this competitive testing program all the candidates will return to their homes and jobs.

During the ensuing period of 2 to 3 weeks, laboratory and other test results will be evaluated and a small group of men will be finally selected to become Research Astronaut-Candidates. These men will be notified to report for duty at NASA, Langley Field, on or about April 1, 1959. Travel and moving expenses for them (and their families, if married) will be provided.

VI. APPOINTMENTS AND PAY

These appointments are to civilian positions in the National Aeronautics and Space Administration. They are excepted appointments due to the unusual nature of the duties and the selection process, but carry the benefits and protections of the U.S. Civil Service System including a high level of insurance and retirement.

Original appointments of Research Astronaut-Candidates will be to pay levels commensurate with their backgrounds of education and experience, within the pay range of \$8,330 to \$12,770 per year (GS-12 to GS-15).

As these men become proficient in the field, they will become eligible for Research Astronaut positions with salaries commensurate with those of the most highly skilled NASA Research Pilots and Aeronautical and Space Scientists.